IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: H. Takechi et al.	: Art Unit:
Serial No.: To Be Assigned	: Examiner:
Filed: Herewith	:
FOR: GUI-EQUIPPED TERMINAL APPARATUS, RESOURCE CONTROL TERMINAL APPARATUS, NETWORK SYSTEM, MEDIUM, AND INFORMATION AGGREGATE	:

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

S I R :

Prior to examination, please amend the above-identified application as follows:

IN THE SPECIFICATION:

Please replace the following paragraphs:

At page 9, line 7:

One aspect of the present invention is a GUI-equipped terminal apparatus which is connected to another terminal device through a network, and forms a distributed software environment, comprising:

At page 10, lines 9-10:

Another aspect of the present invention is the GUI-equipped terminal apparatus further comprising display means of displaying an image drawing signal output from said GUI display means on a monitor,

At page 10, line 23:

Still another aspect of the present invention is a resource control terminal apparatus which is connected to another terminal device through a network, and forms a distributed software environment, comprising:

At page 12, lines 1-2:

Yet another aspect of the present invention is the resource control terminal apparatus,

At page 12, lines 20-21:

Still yet another aspect of the present invention is the resource control terminal apparatus,

At page 13, line 17:

A further aspect of the present invention is a network system, comprising:

At page 16, lines 12-13:

A still further aspect of the present invention is the network system,

At page 17, lines 6-7:

A yet further aspect of the present invention is the network system,

At page 17, lines 22-23:

A still yet further aspect of the present invention is the network system, wherein said resource control terminal apparatus changes a position or an expression of a GUI unit forming bit map data of a GUI image contained in said access confirmation message each time said resource control terminal apparatus transmits said access confirmation message.

At page 18, lines 5-6:

An additional further aspect of the present invention is the resource control terminal apparatus, wherein said resource control program code comprises the steps of:

At page 18, lines 15-16:

A still additional further aspect of the present invention is the resource control terminal apparatus, wherein said resource control program code comprises the steps of:

At page 19, lines 3-4:

A yet still additional further aspect of the present invention is the resource control terminal apparatus, wherein said resource control program code comprises the steps of:

At page 19, lines 14-16:

A still yet additional further aspect of the present invention is the resource control terminal apparatus, wherein said resource control program code comprises the steps of:

At page 20, line 1 and lines 5-6:

A supplementary further aspect of the present invention is a computer-processible medium storing a program and/or data used to direct a computer to perform all or a part of functions of all or a part of means of the resource control terminal apparatus or the GUI-equipped terminal apparatus.

At page 20, line 7 and lines 11-12:

A still supplementary aspect of the present invention is an information aggregate which is a program and/or data used to direct a

computer to perform all or a part of functions of all or a part of means of the resource control terminal apparatus or the GUI-equipped terminal apparatus.

At page 20, line 13 and lines 16-17:

A yet still supplementary aspect of the present invention is a computer-processible medium storing the steps of all or a part of said resource control program code of said resource control terminal apparatus.

At page 22, lines 19-20:

Second, a terminal with the configuration described is used to control resources. That is, a resource control terminal apparatus is connected to another terminal device through a network to establish a distributed software environment, and includes a virtual language environment, access limit search means, and network I/F means. The access limit search means receive an access limit search request from a program code executed in the virtual language environment, transmits an encrypted access confirmation message to another terminal device through the network I/F means, receives and decrypts an encrypted access confirmation reply message from another terminal device through the network I/F means, and answers the access limit search request from the program code executed in the virtual language environment according to the decrypted access confirmation reply message.

At page 23, line 10:

Third, as described, a network system can be configured by connecting at least one GUI-equipped terminal apparatus to at least one resource control terminal apparatus.

At page 24, lines 14-15:

Furthermore, to guarantee the security for the displayed dialog and a response, the system described in claim 8 is adopted. This system is a network system. The access confirmation message transmitted from the resource control terminal apparatus includes bit map data of a GUI image for allowing a user to select the information relating to limiting access requested by an application, the access confirmation reply message transmitted from the GUI-equipped terminal apparatus includes the coordinates of the position at which the user performs an action on the bit map data of the GUI image, the

resource control terminal apparatus confirms the user selection about the information relating to limiting access according to the coordinates of the position at which the user performs the action on the bit map data, and a reply to the access limit search request from the application can be issued based on the user selection.

At page 25, lines 11-12:

To further enhance the security, the system described is used. This system is a network system, and changes the position or representation of a GUI unit forming the bit map data of a GUI image contained in the access confirmation message each time the resource control terminal apparatus transmits an access confirmation message. In this system, although a malicious third party tries to estimate the coordinates of the position at which a desired answer is displayed by tapping a wire for an access confirmation message and a reply message, the bit mat is changed each time, and the texture, etc. forming the position and the bit map is changed. Therefore, it is exceedingly difficult to analyze these data, thereby further hardening the generation of a virus program.

At page 26, line 2:

Furthermore, a terminal having the configuration is used as a GUI-equipped terminal apparatus to avoid the by-product of interrupting display of dialog. That is, the GUI-equipped terminal apparatus is connected to another terminal device through a network to establish a distributed software environment, and includes GUI display means, a virtual language environment, access limit confirmation means, network I/F means, and display means. The GUI display means has one or more outputs. The one or more outputs are connected to the external output terminals to the display means or terminal. The GUI display means has the function of performing the GUI displaying process on the display means only or on both display means and external output terminal at an instruction from the application executed in the virtual language environment. Furthermore, the GUI display means has the function of performing the GUI displaying process only on the display means at an instruction from the access limit confirmation means. The access limit confirmation means receives an encrypted access confirmation message from

another terminal device through the network I/F means, and transmits an encrypted access confirmation reply message to another terminal device through the network I/F means.

At page 27, lines 10 and 13:

Furthermore, to solve the problem that a destination terminal to display the dialog on is not always an appropriate terminal for obtaining permission for access, the resource control terminal apparatus, and the program code according to claim 12 can be used, or the resource control terminal apparatus according to claim 5 and the program code can be used.

At page 27, lines 14-15:

The resource control terminal apparatus is connected to another terminal device through a network to establish a distributed software environment, and includes a virtual language environment, access limit search means, and network I/F means. The access limit search means receives an access limit search request specifying an optional program ID from the program code executed in the virtual language environment, retrieves another terminal device executing the program having the program ID, transmits an encrypted access confirmation message to another terminal device through the network I/F means, receives and decrypts an encrypted access confirmation reply message from another terminal device through the network I/F means, and answers the access limit search request from the program code executed in the virtual language environment according to the decrypted access confirmation reply message.

At page 28, line 7:

In this resource control terminal apparatus, the program code is executed. The program code is executed in a virtual language environment of a resource control terminal, and specifies a program ID indicating another program and transmits an access limit search request to the access limit search means when an access request is received from the other program, receives a reply to the access limit search request, and determines whether or not the access request can be accepted based on the reply. With the above mentioned configuration, the application can confirm the intention of the user in a desired terminal device.

At page 28, lines 17-18:

The resource control terminal apparatus is connected to another terminal device through a network to establish a distributed software environment, and includes a virtual language environment, access limit search means, and network I/F means. The access limit search means receives an access limit search request specifying a profile ID from a program code executed in the virtual language environment, retrieves a terminal device having a right to permit access corresponding to a profile ID, transmits an encrypted access confirmation message to a terminal device having a right to permit access through the network I/F means, receives and decrypts an encrypted access confirmation reply message from a terminal device having a right to permit access through the network I/F means, and answers the access limit search request from the program code executed in the virtual language environment according to the decrypted access confirmation reply message.

At page 29, line 11:

In this resource control terminal apparatus, a program code is executed. This program code is executed in a virtual language environment of a resource control terminal, and specifies a profile and transmits an access limit search request to the access limit search means when an access request is received from the other program, receives a reply to the access limit search request, and determines whether or not the access request can be accepted based on the reply. With the configuration, the intention of the user can be confirmed in the terminal device which is normally used by a user having a right to access data.

At page 30, line 2:

Furthermore, to solve the problem of inconvenient process relating to the above mentioned right to permit access, a user intention confirmation request is broadcast to a plurality of terminals, and a result obtained from an answering terminal is adopted. In this method, to avoid the conflict among a plurality of answers, the system is used. This system is configured by at least one GUI-equipped terminal apparatus connected to at least one resource control terminal apparatus. The resource control terminal apparatus transmits an access confirmation message to the GUI-equipped

terminal apparatus through broadcast. The GUI-equipped terminal apparatus transmits an access limit confirmation receipt message only when an access confirmation message is received when a user directly operates the GUI-equipped terminal apparatus and when an access confirmation reply message from another GUI-equipped terminal apparatus is not received. Then, the GUI-equipped terminal apparatus broadcasts an access confirmation reply message by performing a GUI displaying process and confirming the intention of the user. Thus, only the result of the terminal first issuing a reply message in a plurality of users having a right to permit access comes to be effect, thereby immediately terminating the dialog in the other terminal.

At page 30, line 20 and 24:

Finally, the program code is used to perform a reserving process without fail even if a user is absent at a predetermined time. The program code is executed in the virtual language environment of the resource control terminal apparatus. When an access right confirmation request is received from another program, an access limit search request is issued in the same procedure as the access confirmation request. According to the reply, it is determined whether or not access requested by the access right confirmation request can be accepted. When this program code is used, an application transmits an access right confirmation request to the program code when a reservation is made so that the program code can issue an access limit search request in the same procedure as the access confirmation request, thereby confirming the intention of the user through dialog. As a result, a confirmation result is used when an actual access request is transmitted at a reserved and predetermined time, thereby performing the reserved operation without fail.

IN THE CLAIMS:

Please replace claims 14-16 as follows:

14. (Amended) A computer-processible medium storing a program and/or data used to direct a computer to perform all or a part of functions

of all or a part of means of the resource control terminal apparatus or the GUI-equipped terminal apparatus according to any one of claims 1 to 7.

15. (Amended) An information aggregate which is a program and/or data used to direct a computer to perform all or a part of functions of all or a part of means of the resource control terminal apparatus or the GUI-equipped terminal apparatus according to any one of claims 1 to 7.

16. (Amended) A computer-processible medium storing the steps of all or a part of said resource control program code of said resource control terminal apparatus according to any one of claims 10 to 12.

Respectfully Submitted,

Allan Ratner, Reg. No. 19,717
Attorney for Applicants

AR/ap
Dated: May 30, 2001

Suite 301
One Westlakes, Berwyn
P.O. Box 980
Valley Forge, PA 19482-0980
(610) 407-0700

The Assistant Commissioner for Patents is hereby authorized to charge payment to Deposit Account No. **18-0350** of any fees associated with this communication.

EXPRESS MAIL Mailing Label Number: EL854575821US
Date of Deposit: May 30, 2001

I hereby certify that this paper and fee are being deposited, under 37 C.F.R. § 1.10 and with sufficient postage, using the "Express Mail Post Office to Addressee" service of the United States Postal Service on the date indicated above and that the deposit is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

Kathleen Libby

Kathleen Libby

VERSION WITH MARKINGS TO SHOW CHANGES MADE

SPECIFICATION:

At page 9, line 7:

~~The 1st invention~~One aspect of the present invention is a GUI-equipped terminal apparatus which is connected to another terminal device through a network, and forms a distributed software environment, comprising:

At page 10, lines 9-10:

~~The 2nd invention~~Another aspect of the present invention is the GUI-equipped terminal apparatus ~~according to 1st invention~~ further comprising display means of displaying an image drawing signal output from said GUI display means on a monitor,

At page 10, line 23:

~~The 3rd invention~~Still another aspect of the present invention is a resource control terminal apparatus which is connected to another terminal device through a network, and forms a distributed software environment, comprising:

At page 12, lines 1-2:

~~The 4th invention~~Yet another aspect of the present invention is the resource control terminal apparatus ~~according to 3rd invention~~,

At page 12, lines 20-21:

~~The 5th invention~~Still yet another aspect of the present invention is the resource control terminal apparatus ~~according to 3rd invention~~,

At page 13, line 17:

~~The 6th invention~~A further aspect of the present invention is a network system, comprising:

At page 16, lines 12-13:

~~The 7th invention~~A still further aspect of the present invention is the network system ~~according to 6th invention~~,

At page 17, lines 6-7:

~~The 8th invention~~A yet further aspect of the present invention is the network system ~~according to 6th or 7th inventions~~,

At page 17, lines 22-23:

~~The 9th invention~~A still yet further aspect of the present invention is the network system ~~according to 8th invention~~, wherein said resource control terminal apparatus changes a position or an expression of a GUI unit forming bit map data of a GUI image contained in said access confirmation message each time said resource control terminal apparatus transmits said access confirmation message.

At page 18, lines 5-6:

~~The 10th invention~~An additional further aspect of the present invention is the resource control terminal apparatus ~~according to 3rd invention~~, wherein said resource control program code comprises the steps of:

At page 18, lines 15-16:

~~The 11th invention~~A still additional further aspect of the present invention is the resource control terminal apparatus ~~according to 4th invention~~, wherein said resource control program code comprises the steps of:

At page 19, lines 3-4:

~~The 12th invention~~A yet still additional further aspect of the present invention is the resource control terminal apparatus ~~according to 5th invention~~, wherein said resource control program code comprises the steps of:

At page 19, lines 14-16:

~~The 13th invention~~A still yet additional further aspect of the present invention is the resource control terminal apparatus ~~according to any one of 3rd to 5th inventions~~, wherein said resource control program code comprises the steps of:

At page 20, line 1 and lines 5-6:

~~The 14th invention~~A supplementary further aspect of the present invention is a computer-processible medium storing a program and/or data used to direct a computer to perform all or a part of functions of all or a part of means of the resource control terminal apparatus or the GUI-equipped terminal apparatus ~~according to any one of 1st to 9th inventions~~.

At page 20, line 7 and lines 11-12:

~~The 15th invention~~A still supplementary aspect of the present invention is an information aggregate which is a program and/or data used to direct a computer to perform all or a part of functions of all or a part of means of the resource control terminal apparatus or the GUI-equipped terminal apparatus ~~according to any one of 1st to 9th inventions~~.

At page 20, line 13 and lines 16-17:

~~The 16th invention~~ A yet still supplementary aspect of the present invention is a computer-processible medium storing the steps of all or a part of said resource control program code of said resource control terminal apparatus ~~according to any one of 10th to 13th inventions~~.

At page 22, lines 19-20:

Second, a terminal with the configuration described ~~in claim 3~~ is used to control resources. That is, a resource control terminal apparatus is connected to another terminal device through a network to establish a distributed software environment, and includes a virtual language environment, access limit search means, and network I/F means. The access limit search means receive an access limit search request from a program code executed in the virtual language environment, transmits an encrypted access confirmation message to another terminal device through the network I/F means, receives and decrypts an encrypted access confirmation reply message from another terminal device through the network I/F means, and answers the access limit search request from the program code executed in the virtual language environment according to the decrypted access confirmation reply message.

At page 23, line 10:

Third, as described ~~in claim 6~~, a network system can be configured by connecting at least one GUI-equipped terminal apparatus to at least one resource control terminal apparatus.

At page 24, lines 14-15:

Furthermore, to guarantee the security for the displayed dialog and a response, the system described in claim 8 is adopted. This system is a network system ~~described in claim 6 or 7~~. The access confirmation message transmitted from the resource control terminal apparatus includes bit map data of a GUI image for allowing a user to select the information relating to limiting access requested by an application, the access confirmation reply message transmitted from the GUI-equipped terminal apparatus includes the coordinates of the position at which the user performs an action on the bit map data of the GUI image, the resource control terminal apparatus confirms the user selection about the information relating to limiting access according to the coordinates of the position at which the

user performs the action on the bit map data, and a reply to the access limit search request from the application can be issued based on the user selection.

At page 25, lines 11-12:

To further enhance the security, the system described ~~in claim 9~~ is used. This system is a network system ~~according to claim 8~~, and changes the position or representation of a GUI unit forming the bit map data of a GUI image contained in the access confirmation message each time the resource control terminal apparatus transmits an access confirmation message. In this system, although a malicious third party tries to estimate the coordinates of the position at which a desired answer is displayed by tapping a wire for an access confirmation message and a reply message, the bit mat is changed each time, and the texture, etc. forming the position and the bit map is changed. Therefore, it is exceedingly difficult to analyze these data, thereby further hardening the generation of a virus program.

At page 26, line 2:

Furthermore, a terminal having the configuration ~~according to claim 2~~ is used as a GUI-equipped terminal apparatus to avoid the by-product of interrupting display of dialog. That is, the GUI-equipped terminal apparatus is connected to another terminal device through a network to establish a distributed software environment, and includes GUI display means, a virtual language environment, access limit confirmation means, network I/F means, and display means. The GUI display means has one or more outputs. The one or more outputs are connected to the external output terminals to the display means or terminal. The GUI display means has the function of performing the GUI displaying process on the display means only or on both display means and external output terminal at an instruction from the application executed in the virtual language environment. Furthermore, the GUI display means has the function of performing the GUI displaying process only on the display means at an instruction from the access limit confirmation means. The access limit confirmation means receives an encrypted access confirmation message from another terminal device through the network I/F means, and transmits an encrypted access confirmation reply message to another terminal device through the network I/F means.

At page 27, lines 10 and 13:

Furthermore, to solve the problem that a destination terminal to display the dialog on is not always an appropriate terminal for obtaining permission for access, the resource control terminal apparatus ~~according to claim~~ 4, and the program code according to claim 12 can be used, or the resource control

terminal apparatus according to claim 5 and the program code ~~according to claim 13~~ can be used.

At page 27, lines 14-15:

The resource control terminal apparatus ~~according to claim 4~~ is connected to another terminal device through a network to establish a distributed software environment, and includes a virtual language environment, access limit search means, and network I/F means. The access limit search means receives an access limit search request specifying an optional program ID from the program code executed in the virtual language environment, retrieves another terminal device executing the program having the program ID, transmits an encrypted access confirmation message to another terminal device through the network I/F means, receives and decrypts an encrypted access confirmation reply message from another terminal device through the network I/F means, and answers the access limit search request from the program code executed in the virtual language environment according to the decrypted access confirmation reply message.

At page 28, line 7:

In this resource control terminal apparatus, the program code ~~according to claim 12~~ is executed. The program code is executed in a virtual language environment of a resource control terminal, and specifies a program ID indicating another program and transmits an access limit search request to the access limit search means when an access request is received from the other program, receives a reply to the access limit search request, and determines whether or not the access request can be accepted based on the reply. With the above mentioned configuration, the application can confirm the intention of the user in a desired terminal device.

At page 28, lines 17-18:

The resource control terminal apparatus ~~according to claim 5~~ is connected to another terminal device through a network to establish a distributed software environment, and includes a virtual language environment, access limit search means, and network I/F means. The access limit search means receives an access limit search request specifying a profile ID from a program code executed in the virtual language environment, retrieves a terminal device having a right to permit access corresponding to a profile ID, transmits an encrypted access confirmation message to a terminal device having a right to permit access through the network I/F means, receives and decrypts an encrypted access confirmation reply message from a terminal device having a right to permit access through the network I/F means, and answers the access limit search request from the program code executed in the virtual language environment according to the decrypted access confirmation reply message.

At page 29, line 11:

In this resource control terminal apparatus, a program code ~~according to claim 13~~ is executed. This program code is executed in a virtual language environment of a resource control terminal, and specifies a profile and transmits an access limit search request to the access limit search means when an access request is received from the other program, receives a reply to the access limit search request, and determines whether or not the access request can be accepted based on the reply. With the configuration, the intention of the user can be confirmed in the terminal device which is normally used by a user having a right to access data.

At page 30, line 2:

Furthermore, to solve the problem of inconvenient process relating to the above mentioned right to permit access, a user intention confirmation request is broadcast to a plurality of terminals, and a result obtained from an answering terminal is adopted. In this method, to avoid the conflict among a plurality of answers, the system ~~according to claim 7~~ is used. This system is configured by at least one GUI-equipped terminal apparatus connected to at least one resource control terminal apparatus. The resource control terminal apparatus transmits an access confirmation message to the GUI-equipped terminal apparatus through broadcast. The GUI-equipped terminal apparatus transmits an access limit confirmation receipt message only when an access confirmation message is received when a user directly operates the GUI-equipped terminal apparatus and when an access confirmation reply message from another GUI-equipped terminal apparatus is not received. Then, the GUI-equipped terminal apparatus broadcasts an access confirmation reply message by performing a GUI displaying process and confirming the intention of the user. Thus, only the result of the terminal first issuing a reply message in a plurality of users having a right to permit access comes to be effect, thereby immediately terminating the dialog in the other terminal.

At page 30, line 20 and 24:

Finally, the program code ~~according to claim 14~~ is used to perform a reserving process without fail even if a user is absent at a predetermined time. The program code is executed in the virtual language environment of the resource control terminal apparatus ~~according to claim 3, 4, or 5~~. When an access right confirmation request is received from another program, an access limit search request is issued in the same procedure as the access confirmation request. According to the reply, it is determined whether or not access requested by the access right confirmation request can be accepted. When this program code is used, an application transmits an access right confirmation request to the program

code when a reservation is made so that the program code can issue an access limit search request in the same procedure as the access confirmation request, thereby confirming the intention of the user through dialog. As a result, a confirmation result is used when an actual access request is transmitted at a reserved and predetermined time, thereby performing the reserved operation without fail.

CLAIMS:

14. (Amended) A computer-processible medium storing a program and/or data used to direct a computer to perform all or a part of functions of all or a part of means of the resource control terminal apparatus or the GUI-equipped terminal apparatus according to any one of claims 1 to ~~9~~7.

15. (Amended) An information aggregate which is a program and/or data used to direct a computer to perform all or a part of functions of all or a part of means of the resource control terminal apparatus or the GUI-equipped terminal apparatus according to any one of claims 1 to ~~9~~7.

16. (Amended) A computer-processible medium storing the steps of all or a part of said resource control program code of said resource control terminal apparatus according to any one of claims 10 to ~~13~~12.